



**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE  
BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES**

In re Patent Application of

CORLEY et al.

Serial No. 09/647,711

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For: DATABASE ACCESS TOOL

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Examiner: Alford W. KINDRED

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November 7, 2007

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P.O. Box 1450  
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**APPEAL BRIEF**

Sir:

Appellant submits herewith a Brief on Appeal pursuant to 37 C.F.R. §41.37.

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(I) **REAL PARTY IN INTEREST**

The real party in interest is the assignee, British Telecommunications public limited company, a British company.

**(II) RELATED APPEALS AND INTERFERENCES**

On information and belief, the appellant, the undersigned, and the assignee are not aware of any related appeals, interferences, or judicial proceedings (past or present), which will directly affect or be directly affected by or have a bearing on the Board's decision in this appeal.

**(III)      STATUS OF CLAIMS**

Claims 1-12 and 14 are pending and have been rejected.

The rejection of claims 1-12 and 14 is being appealed.

A listing of claims is presented in the Claims Appendix to this Appeal Brief.

**(IV) STATUS OF AMENDMENTS**

No amendments have been filed since the date of the Final Rejection.

All prior amendments have been entered.

(V) **SUMMARY OF CLAIMED SUBJECT MATTER**

Each independent claim, each dependent claim argued separately, and each claim having means plus function language is summarized below including exemplary reference(s) to page and line number(s) of the specification.

Claim 1

A database access tool for receiving, constructing and selecting queries for submission to a database in accordance with one non-limiting, illustrative, example embodiment is reflected in claim 1. *See, e.g., Figures 1-3; and page 4, line 11-page 9, line 11.* The database access tool comprises a database. *See, e.g., page 1, lines 4-9; database 120 shown in Figures 1-3; page 5, lines 13-15 and lines 20-25; and page 13, lines 30-31.* Means for a user to construct database queries (*see, e.g., user terminal 115 shown in Figure 1, page 4, lines 14-16; query generator 200 shown in Figure 2; page 6, lines 7-12; step 300 in Figure 3; page 7, lines 9-15*). A query store for storing previously constructed database queries, the query store being separate from the database (*see, e.g., query store 130 shown in Figure 1-3; page 5, lines 16-19, page 6, lines 16-25; page 7, lines 1-23; page 10, lines 1-5; and page 14, lines 1-2*). A search tool operable to receive a user constructed database query and search the query store for a previously constructed database query that resembles said user constructed database query (*see, e.g., Figure 3; page 7, lines 9-23; page 8, lines 9-10; page 9, lines 8-11; page 10, lines 6-11; and page 12, lines 5-17*). And query submission means for selecting between the user constructed query and a previously constructed database query resembling the user constructed query

located by the search tool from the query store, and for submitting the selected query to said database (*see, e.g., query construction tool 100 shown in Figures 1 and 2; page 5, lines 16-19; page 6, line 1 – page 9, line 1; and Figures 4-6*).

#### Claim 2

Claim 2 depends from claim 1 and describes that the means for constructing database queries comprises user input means for loading data to at least one data field in a database query (*see, e.g., query generator 200 shown in Figure 2; page 6, lines 7-12; page 7, lines 9-11; window 400 in Figure 5; page 15, lines 10-14*), and that the search tool comprises means to calculate a similarity factor between the data fields in the database queries stored in the query store and at least one data field in a user constructed database query (*see, e.g., Figure 3; page 10, lines 1-11; page 12, line 18 – page 13, line 27*).

#### Claim 3

Claim 3 depends from claim 2 and describes that the query store and search tool are constructed according to use of case based reasoning (*see, e.g., query store 130 shown in Figures 1-3; page 6, lines 7-8 and lines 17-19; page 7, lines 4-7; steps 300 and 305 in Figure 3; page 7, lines 9-18; page 10, lines 3-11; page 12, lines 5-17*); and that the means for constructing database queries does so to construct a query as a case (*see, e.g., Figures 1-3; page 6, lines 7-12 and lines 16-25; page 7, line 9 – page 9, line 1; page 10, lines 1-11; page 12, lines 5-17*).



Claim 4

Claim 4 depends from claim 2 and describes that management information data is collected in use of the tool to submit queries to the database (*see, e.g., page 7, lines 1-7; page 14, lines 12-21*), the tool further comprising means for collecting the management information, structuring the management information for a respective query in the same manner as a database query constructed by the tool and loading the structured management information to a management information data store that is searchable by means of the search tool (*see, e.g., management information processing capability 210 in the database 230 shown in Figure 2; page 7, lines 1-7; page 14, lines 12-21*).

Claim 5

Claim 5 depends from claim 1 and describes a data store stores previous results associated with previous database queries, wherein the search tool is further operable, when a previously constructed query is identical or similar to the user constructed query is selected, to return the results stored in the data store that are associated with the selected previously constructed query (*see, e.g., results store 135 shown in Figures 1-3; page 6, lines 13-15; page 8, lines 9-13; page 9, lines 2-7*).

Claim 6

A method of accessing a database in accordance with another non-limiting, illustrative, example embodiment is reflected in claim 6. The method comprises constructing a database query by a user (*see, e.g., page 6, lines 7-8 and lines 16-17; step*

300 in Figure 3; page 7, lines 9-11); searching a query store containing previously constructed database queries for a previously constructed query that resembles the user constructed database query (see, e.g., page 6, lines 17-19; page 7, lines 11-18), the query store being separate from the database (see, e.g., query store 130 in Figures 1-3 which is separate from the database 120; page 5, lines 16-19); selecting between the user constructed database query and a previously constructed database query resembling the user constructed query from the query store during the searching step (see, e.g., query construction tool 100 shown in Figures 1 and 2; page 5, lines 16-19; page 6, line 1 – page 9, line 1; and Figures 4-6); and submitting the selected query to the database (see, e.g., Figure 3, page 7, line 9 – page 8, line 23).

#### Claim 7

Claim 7 depends from claim 6 and describes that the step of constructing a database query comprises loading data to at least one data field in a database query (see, e.g., query generator 200 shown in Figure 2; page 6, lines 7-12; page 7, lines 9-11; window 400 in Figure 5; page 15, lines 10-14).

#### Claim 8

Claim 8 depends from claim 7 and describes that the step of searching comprises calculating a similarity factor between data fields in the previously constructed database queries stored in the query store and at least one data field in the user constructed

database query (*see, e.g., Figure 3; page 10, lines 1-11; page 12, line 18 – page 13, line 27*).

#### Claim 9

Claim 9 depends from claim 7 and describes that the query store is constructed by case based reasoning (*see, e.g., query store 130 shown in Figures 1-3; page 6, lines 7-8 and lines 17-19; page 7, lines 4-7; steps 300 and 305 in Figure 3; page 7, lines 9-18; page 10, lines 3-11; page 12, lines 5-17*).

#### Claim 10

Claim 10 depends from claim 9 and describes that the step of constructing a query comprises creating a query as a case using case based reasoning (*see, e.g., Figures 1-3; page 6, lines 7-12 and lines 16-25; page 7, line 9 – page 9, line 1; page 10, lines 1-11; page 12, lines 5-17*), and that the step of searching comprises using case based reasoning (*see, e.g., page 6, lines 17-19; page 7, lines 16-18; page 12, lines 5-17*).

#### Claim 11

Claim 11 depends from claim 6 and further comprises: collecting management information data for a query submitted to the database (*see, e.g., page 7, lines 1-7; page 14, lines 12-21*); structuring the management information in the same manner as the respective query; and loading the structured management information to a searchable management information data store (*see, e.g., management information*

*processing capability 210 in the database 230 shown in Figure 2; page 7, lines 1-7; page 14, lines 12-21)*

#### Claim 12

Claim 12 depends from claim 6 and further comprises storing results associated with the previously constructed database queries in a data store, and if a previously constructed database query is selected, returning the results associated with the selected previously constructed database query (*see, e.g., results store 135 shown in Figures 1-3; page 6, lines 13-15; page 8, lines 9-13; page 9, lines 2-7*).

#### Claim 14

A database access tool in accordance with another non-limiting illustrative embodiment is reflected in claim 14. *See, e.g., Figures 1-3; and page 4, line 11-page 9, line 11*. The database access tool comprises a database. *See, e.g., page 1, lines 4-9; database 120 shown in Figures 1-3; page 5, lines 13-15 and lines 20-25; and page 13, lines 30-31*. Means for a user to construct database queries (*see, e.g., user terminal 115 shown in Figure 1, page 4, lines 14-16; query generator 200 shown in Figure 2; page 6, lines 7-12; step 300 in Figure 3; page 7, lines 9-15*). A query store for storing previously constructed database queries, the query store being separate from the database (*see, e.g., query store 130 shown in Figure 1-3; page 5, lines 16-19, page 6, lines 16-25; page 7, lines 1-23; page 10, lines 1-5; and page 14, lines 1-2*). A data store for storing previous results associated with previous database queries (*see, e.g., results store 135 shown in*

*Figures 1-3; page 6, lines 13-15; page 8, lines 9-13; page 9, lines 2-7).* A search tool operable to receive a user constructed query and search the query store for a previously constructed database query that resembles said user constructed database query (*see, e.g., Figure 3; page 7, lines 9-23; page 8, lines 9-10; page 9, lines 8-11; page 10, lines 6-11; and page 12, lines 5-17*). Query submission means for selecting between a user constructed query and the previously constructed database query resembling the user constructed query located by the search tool from the query store, and for submitting the selected query to the database (*see, e.g., query construction tool 100 shown in Figures 1 and 2; page 5, lines 16-19; page 6, line 1 – page 9, line 1; and Figures 4-6*), wherein the search tool is further operable, when a previously constructed query is identical or similar to the user constructed query is selected, to return the results stored in the data store that are associated with the selected previously constructed query (*see, e.g., results store 135 shown in Figures 1-3; page 6, lines 13-15; page 8, lines 9-13; page 9, lines 2-7*).

(VI) **GROUND OF REJECTION TO BE REVIEWED ON APPEAL**

1. The rejection of claims 1, 2, 5-8, 11, 12 and 14 under 35 U.S.C. §103(a) as allegedly being “obvious” over McComb et al. (U.S. Patent No. 6,006,224, hereinafter “McComb”) in view of Culliss (U.S. Patent Application Publication No. 2003/0187837).

2. The rejection of claims 3, 4, 9 and 10 under 35 U.S.C. §103(a) as allegedly being “obvious” over McComb in view of Culliss and further in view of Malloy (U.S. Patent No. 5,787,234).

(VII) ARGUMENT

(1) Claims 1, 2, 5-8, 11, 12 and 14 would not have been made obvious by the proposed McComb-Culliss combination.

The independent claims of the claimed invention each recite a database access tool or method in which a user constructed query is compared to a database of previous queries in an effort to identify a previously constructed database query that resembles the user constructed database query, and to select between the user constructed query and a previously constructed database query (located by the search of the database of previously constructed queries) resembling the user constructed database query, and submitting the selected query to a database.

McComb is directed to a database system include a query mechanism for accessing data stored in a database. The database system of McComb includes classes comprising stored codes enabling user generated database queries comprising data indicating one or more addresses at which the desired data resides. The query mechanism parses a query into a plurality of query components. The query system initiates a query component object for each of the query components. The query component objects are chained together to form query chains that enable message passing between the query component objects.

There is no teaching or suggestion in McComb of the specifically recited features of the independent claims. For example, as acknowledged by the Examiner in numerous Office Actions, there is no teaching or suggestion in McComb of the feature of *a search tool operable to receive a user constructed database query and search the query store for*

*a previously constructed query that resembles said user constructed database query.* It is respectfully submitted that the claimed feature of “selecting between the user constructed query and a previously constructed database query resembling the user constructed query *located by the search tool*” likewise cannot be disclosed by McComb (i.e., if there is no teaching or suggestion of the search tool, there can be no selection between items where one of the items is identified or selected by a search tool).

Culliss is cited as allegedly overcoming the foregoing deficiencies of McComb. It is respectfully submitted that Culliss fails to overcome the fundamental deficiencies of McComb, and thus the combination fails to render the claims obvious.

Culliss is directed to a personalized search method that organizes information in which the search activity of previous users is monitored and such activity is used to organize articles for future users. Personal data about future users can be used to provide different article rankings depending on the search activity and personal data of the previous users. In short, Culliss discloses a system of ranking or organizing data based on personal preferences. There is no teaching or suggestion in Culliss of the specifically claimed features of a search tool operable to search a query store for a previously constructed database query that resembles a user constructed database query, or of selecting between the user constructed query and the previously constructed query identified by the search tool, and submitting the query thus selected to the database. Moreover, it is worth noting that there is no teaching or suggestion in Culliss of searching for a previously constructed query and offering this previously constructed query that is similar to the user constructed query as an alternative query. Culliss merely uses generic



categories of search (e.g., shoes) and applies relevancy score to the results of the search based on user data.

In one instance, according to Culliss, the user may be presented with or suggested to use queries that may use related key terms or that contain the original query or portions thereof. The system may also identify other narrower related queries (see, e.g., paragraphs [0060] – [0066]) to assist the user in refining their search. However, there is no teaching or suggestion of the feature of *selecting* between these alternative queries and the user constructed query. In another instance, Culliss teaches displaying results for both the user constructed query and alternative narrower queries (see, e.g., paragraphs [0068] – [0072]). However, this is not a selection between the different alternative queries, but merely a ranked display of the results obtained by all queries. This is the opposite of selection. There is no selection whatsoever performed by the system of Culliss. Therefore, Culliss does not provide the claimed query submission means, and thus cannot render the claimed invention obvious.

Contrary to disclosing the claimed method of selecting between queries, Culliss is directed to a method of organizing information in which the search activity of previous users is monitored and such activity is used to organize articles for future users. Personal data about future users can be used to provide different article rankings depending on the search activity and personal data of the previous users. According to Culliss (see, e.g., Fig. 1), a first search query from a first user identifies certain articles, which are then presented to the first user. Based on various actions, for example, the selection of articles made by the first user, an index that ranks the relevancy of certain articles is updated to

reflect the selections made by the first user. When the same query is received from a second user, the articles are presented to the second user in an order based on the ranking of the articles based on access by previous users. The bulk of the Culliss disclosure is directed to the manner in which the indexing, ranking and/or narrowing of search results is accomplished, not any selection by the system between a user constructed database query and a previously constructed query resembling the user constructed query identified by a search tool. There is simply no teaching or suggestion of the claimed selection feature in Culliss.

Thus, in complete contrast to the claimed invention, Culliss is directed to an indexing tool for presenting search results in order of relevancy to a user. While the indexing tool disclosed by Culliss may use a number of similar database queries and personal data characteristics to index search results, it does not disclose or suggest anywhere, the feature of selecting between a user constructed query and one located by a search tool. In short, Culliss is directed to a tool for indexing search results, *not* to selecting between alternative database queries. Quite to the contrary, instead of selecting between queries, Culliss teaches displaying results for all similar queries. Using all queries is the antithesis of selecting between queries. Even those paragraphs cited in the Office Action bear this out.

Therefore, it is respectfully submitted that Culliss fails to overcome the fundamental admitted and other deficiencies noted above with respect to McComb.

Therefore, even if, *arguendo*, the combination of McComb and Culliss were proper, the combination nevertheless fails to render the claimed invention obvious.

Dependent claims 2, 5, 7, 8, 11 and 12 are allowable based at least on their respective dependency from claims 1 and 6.

#### Claim 2

Claim 2 is patentable because it is not made obvious by the proposed combination of McComb and Culliss.

Claim 2 depends from claim 1 and is believed to be allowable because of this dependency.

Moreover, claim 2 recites that the search tool comprises “means to calculate a similarity factor between the data fields in the database queries stored in the query store and at least one data field in a user constructed database query.” Both McComb and Culliss are silent as to this claim element.

The Office Action alleges that this feature is disclosed by McComb at Col. 5, lines 10-37). Nowhere in this excerpt is there any teaching or suggestion of calculating a similarity factor between the different queries. The disclosure merely recites general query features supported by SQL.

For at least this additional and independent reason, Applicant submits that claim 2 patentably distinguishes over the applied references.

#### Claims 4 and 11

Claims 4 and 11 are patentable because they are not rendered obvious by the proposed combination of McComb and Culliss.

Claim 4 depends indirectly from independent claim 1 and claim 11 depends indirectly from claim 6 and are believed to be allowable because of this dependency.

Moreover, claims 4 and 11 recite the collection of management information data, structuring the management information in a particular manner and making the management information searchable by the search tool. Contrary to the allegation in the Office Action, there is no teaching or suggestion of this feature in McComb. The portions of McComb cited by the Examiner are directed to the chaining of query objects. McComb is silent as to the claimed management information.

For at least this additional and independent reason, Applicant submits that claims 4 and 11 patentably distinguish over the applied references.

#### Claims 3, 4, 9 and 10

Claims 3, 4, 9 and 10 are patentable because they are not made obvious by the proposed combination of McComb, Culliss and Malloy.

Claims 3 and 4 depend indirectly from independent claim 1, and claims 9 and 10 depend indirectly from independent claim 6 and are believed to be allowable because of this dependency.

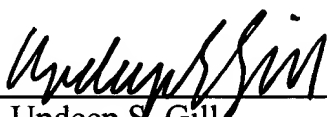
Malloy fails to overcome the fundamental deficiencies noted above with respect to McComb and Culliss. For at least this reason, Applicant submits that claims 3, 4, 9 and 10 patentably distinguish over the applied references.

**CONCLUSION**

In conclusion it is believed that the application is in clear condition for allowance; therefore, reversal of the final rejection and passage of the subject application to issue are earnestly solicited.

Respectfully submitted,

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(VIII) **CLAIMS APPENDIX**

Claim 1.      *(Previously Presented)*      A database access tool comprising:

                  a database;

                  means for a user to construct database queries;

                  a query store for storing previously constructed database queries, said query store being separate from said database;

                  a search tool operable to receive a user constructed database query and search the query store for a previously constructed database query that resembles said user constructed database query; and

                  query submission means for selecting between the user constructed query and a previously constructed database query resembling the user constructed query located by the search tool from the query store, and for submitting the selected query to said database.

Claim 2.      *(Previously Presented)*      A tool according to Claim 1 wherein the means for constructing database queries comprises user input means for loading data to at least one data field in a database query and the search tool comprises means to calculate a similarity factor between the data fields in database queries stored in the query store and at least one data field in a user constructed database query.

Claim 3.      *(Original)*     A tool according to Claim 2 wherein the query store and the search tool are constructed according to use of case based reasoning (CBR) and the means for constructing database queries does so to construct a query as a case.

Claim 4.      *(Previously Presented)*     A tool according to Claim 2 wherein management information data is collected in use of the tool to submit queries to the database, the tool further comprising means for collecting said management information, structuring the management information for a respective query in the same manner as a database query constructed by the tool and loading the structured management information to a management information data store, said management information data store being searchable by means of the search tool.

Claim 5.      *(Previously Presented)*     A database according to claim 1, further comprising a data store for storing previous results associated with previous database queries and wherein the search tool is further operable, when a previously constructed query is identical or similar to the user constructed query is selected, to return the results stored in the data store that are associated with the selected previously constructed query.

Claim 6.      *(Previously Presented)*     A method of accessing a database, the method comprising:  
  
                  constructing a database query by a user;

searching a query store containing previously constructed database queries for a previously constructed query that resembles the user constructed database query, said query store being separate from said database;

selecting between the user constructed database query and a previously constructed database query resembling the user constructed query from the query store during the searching step; and

submitting the selected query to the database.

Claim 7.      (*Previously Presented*)      A method according to claim 6, wherein the step of constructing a database query comprises a user loading data to at least one data field in a database query.

Claim 8.      (*Previously Presented*)      A method according to claim 7, wherein the step of searching comprises calculating a similarity factor between data fields in the previously constructed database queries stored in the query store and at least one data field in the user constructed database query.

Claim 9.      (*Previously Presented*)      A method according to claim 7, wherein the query store is constructed by case based reasoning.



Claim 10.    *(Previously Presented)*    A method according to claim 9, wherein the step of constructing a query comprises creating a query as a case using case based reasoning, and the step of searching comprises using case based reasoning.

Claim 11.    *(Previously Presented)*    A method according to claim 6, further comprising:

collecting management information data for a query submitted to the database;

structuring the management information in the same manner as the respective query; and

loading the structured management information to a searchable management information data store.

Claim 12.    *(Previously Presented)*    A method according to claim 6, further comprising:

storing results associated with the previously constructed database queries query in a data store, and if a previously constructed database query is selected, returning the results associated with the selected previously constructed database query.

Claim 13.    *(Canceled)*

Claim 14.    *(Previously Presented)*    A database access tool, comprising:

a database;

means for constructing database queries by a user;

a query store for storing previously constructed database queries, said query store being separate from said database;

a data store for storing previous results associated with previous database queries;

a search tool operable to receive a user constructed database query and search the query store for a previously constructed database query that resembles said user constructed database query; and

query submission means for selecting between the user constructed query and the previously constructed database query resembling the user constructed query located by the search tool from the query store, and for submitting the selected query to the database;

wherein the search tool is further operable, when a previously constructed query is identical or similar to the user constructed query is selected, to return the results stored in the data store that are associated with the selected previously constructed query.

**(IX) EVIDENCE APPENDIX**

None.

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(X) **RELATED PROCEEDINGS APPENDIX**

None.